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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/735,027

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Sumiya Nagatsuka

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EXAMINER

STREGE, JOHN B

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

08/21/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/735,027	Applicant(s) NAGATSUKA, SUMIYA	
	Examiner John B. Strege	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. The amendment received 5/9/07 has been entered in full.

Response to Arguments

2. Applicant's arguments filed 5/9/07 have been fully considered but they are not persuasive. Specifically the Applicant argues that Tsuji does not disclose a processing device which performs at least one of gradation processing to control image contrast, frequency processing to control image sharpness, and dynamic range compression to narrow the image contrast on the selected part of the two-dimensional image data based on the determined processing condition. The Examiner respectfully disagrees. As seen in figure 4 of Tsuji it is disclosed that the image is passed through a high pass filter. This is frequency processing which controls the sharpness of the image. Thus Tsuji reads on the above claim limitation, and the previous art rejection is maintained. Furthermore it should be noted that the Applicant's admitted prior art disclose that it is well known to carry out frequency processing and gradation processing before outputting the results to a display unit (see lines 1-5 on page 2 of the specification).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Tsiko et al USPN 7,031,506.

As to claim 1, Tsuji et al teaches an image processing apparatus which processes an image that is composed of two-dimensional image data corresponding to an image reading area of an image reader (image processing apparatus which, upon reading coded X-ray medical image from a storage medium, automatically determines effective regions for diagnosis, reads data corresponding to the determined regions, and displays the read data, column 4, lines 65-67, figure 20) , comprising: a specifying device which specifies an output-size within the image reading area of the image reader (setting of initial stream of data input, column 6, lines 40-50); a determining device which selects a part of the two- dimensional image data that corresponds to the output-size (area 17 that is identified by the diagnostic support unit 16 as positive, column 6, lines 35-38), analyzes the selected part of the two-dimensional image data (the diagnostic support unit 16 analyzes the decoded image data 13 (ROI), column 6, lines 54-55), and determines a processing condition for the selected part of the two-dimensional image data based on the analysis (checks the disease location on the patient's body and outputs positive area data 17); and a processing device which performs at least one of gradation processing to control image contrast, frequency processing to control image sharpness, and dynamic range compression to narrow the

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image contrast on the selected part of the two-dimensional image data based on the determined processing condition (.input control unit 14 determines which area in the encoded image input in step 22 should be concentrated on for further analysis based on positive area data 17 output from the diagnostic support unit 16, column 6, lines 60-65). Note that Tsuji et al teaches the output size within the image reading area according to a certain diameter of 8mm, 12 mm and 16 mm and is calculate where the surface area ($S = [\text{number of pixels contained in the shadow candidate}] \times [\text{surface area of one pixel}]$, column 8, lines 1-26, furthermore as seen in figure 4 Tsuji discloses that the image is passed through a high pass filter. This is frequency processing which controls the sharpness of the image.

As to claim 2, Tsuji et al teaches the image processing apparatus of claim 1, wherein said image comprises X-ray image (display of x-ray images, column 7, lines 9-11).

As to claim 3; Tsuji et al teaches the image processing apparatus of claim 1, wherein said determining device recognizes a significant data to diagnosis from the selected part of the two-dimensional image data (note that in figure 6 the diagram shows neural network for determining whether the extracted area is a positive test result or not, column 7, lines 28-32).

As to claim 4, Tsuji et al teaches the image processing apparatus of claim 3, wherein said determining device creates a cumulative histogram of the significant data and determining the processing condition according to the result of the cumulative

histogram (figure 7A, 7B, 7C, and 7D are diagrams illustrating a hypothetical example of the shadow based diagnostic support process).

As to claim 5, Tsuji et al teaches the image processing apparatus of the claim 1, further comprising: a display for displaying a picture image of the two-dimensional image data with a trimming frame according to the output-size (image display unit, 15).

As to claims 6-10 differ from claims 1-5 only in that claims 6-10 are method claims whereas, claims 1-5 are apparatus claims. Thus, claims 6-10 are analyzed as previously discussed with respect to claims 1-5 above. Note that FIG. 20 is a block diagram of an image processing apparatus according to an embodiment of the present invention, designed to execute the image processing method described in FIG. 1.

As to claims 11-12 differ from claims 1-5 only in that claims 11-12 are computer claims whereas, claims 1-5 are apparatus claims. Thus, claims 11-12 are analyzed as previously discussed with respect to claims 1-5 above (see column 16, lines 31-38)

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John B. Strege whose telephone number is (571) 272-7457. The examiner can normally be reached on Monday-Friday between the hours of 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JS


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